

## C.E.L. AEROSPACE TEST EQUIPMENT LIMITED

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**Keywords:** C.E.L. Aerospace Test Equipment manufactures engine test equipment and engine accessory test equipment. We specialize in turboshaft, turboprop and turbojet/turboprop testing. We offer complete turnkey test facilities or specific products and engineering services. Our expertise is offered internationally.

**History:** After accumulating years of experience gained while working at major engine manufacturers, a small group of investors/engineers pooled their resources and founded C.E.L. Aerospace Test Equipment Ltd. in 1988. From these beginnings, the company quickly grew to provide complete multi-million dollar turnkey test facilities. CEL's headquarters are located in Montreal and they operate a business development office in Connecticut, U.S.A.

**Capability/Products:** Company expertise includes understanding of transient testing requirements for turbine engines and developing practical solutions to meet these requirements. In particular, for turboshaft and turboprop testing, CEL is presently developing a water dynamometer for medium to high speed range. CEL has already developed a multi-engine model test stand which allows a better utilization of test cells by companies whose fleet is composed of different engine models. CEL has also developed a state-of-the-art fuel nozzle test stand for the Pratt & Whitney Canada PW100 family of engines. The Company is the only source of fuel nozzle test stands recommended in the Pratt & Whitney Canada Component Maintenance Manual CMM # 3037038 and 3037326. CEL also developed an Inlet Guide Vane (IGVA) automatic tester for the Pratt & Whitney Canada PW901 APU engine family. Although CEL is a relatively young firm, it already has international projects to its credit. CEL has been involved in international markets since 1989 and has the capability to provide its products worldwide via an established network of agents.

**Experience:** CEL's staff includes engineers who have received, from Pratt & Whitney West Palm Beach/Government Engines and Space Propulsion Unit, awards for their "Outstanding Achievement" in turboshaft programs. These awards highlighted their participation and their innovative solutions to fuel control development and complete engine transient testing. In order to reduce fuel control development time, the Company has gained experience in producing test stands that will permit wave-off from autorotation and other transient manoeuvres for turboshaft engines to be completed on the ground. Our experience comprises a gearbox test stand for helicopters including the EH101.

**Market Strategy:** Our marketing strategies combine research of opportunities, market selection, evaluation of potential projects and associated risks, definition of methods to be used to penetrate selected markets, promotion of products and services and study of project financing.

**Plant Size:** Approximately 7,000 square feet.

**Average Work Force:** Engineers 5, Technicians 10, Administration 3.

**Gross Sales:** \$3.3 Million

**Export Sales:** \$3 Million outside Quebec.

**Ratio Commercial/Defence Exports:** 90% Commercial.

**Qualifications:** Quality Control, AQAP 4.

**Date:** August 18, 1992